

## CLAIMS LISTING

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1. (Currently amended) A fluorophosphate glass formed from a composition comprising:
- 5 a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from 10 to 60 mol percent;  
a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from 10 to 60 mol percent;  
a fluoride,  $\text{BaF}_2 + \text{RF}_x$ , wherein  $\text{RF}_x$  is selected from the group comprising of  $\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$ , and  $\text{BiF}_3$ , from 10 to 75 80 mol percent; and  
a rare earth dopant selected from a group consisting of neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm), europium (Eu), an oxide of manganese (Mn); and mixtures thereof.
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2. (Currently amended) A fluorophosphates glass formed from a composition comprising:
- 15 a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from 10 to 60 mol percent;  
a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from 10 to 60 mol percent;  
a fluoride,  $\text{RF}_x$ , from 10 to 75 80 mol percent, selected from the group consisting of:  $\text{BaF}_2$ ,  $\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$ , and  $\text{BiF}_3$ ; and  
a dopant.
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3. (Canceled)
4. (Currently amended) The glass as in claim 2 wherein the dopant is selected from the group of comprising: the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr);
- 25 samarium (Sm), europium (Eu), an oxide of manganese (Mn); and mixtures thereof.
5. (original) The glass as in claim 4 wherein the dopant is selected from the oxides of the rare earth elements.

6. (Previously presented) The glass as in claim 4 wherein the dopant on a weight percent basis is 2 to 15 percent.

7. (original) The glass as in claim 4 wherein the dopant is selected from the fluorides of the rare earth elements.

8. (currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from 10 to 60 mol percent;

a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from 10 to 60 mol percent;

a fluoride,  $\text{BaF}_2 + \text{RFX}$ , wherein  $\text{RFX}$  is selected from the group comprising of  $\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$ , and  $\text{BiF}_3$ , from 10 to ~~75~~ 80 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm), europium (Eu), an oxide of manganese (Mn); and mixtures thereof.

9. (currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from 5 to 90 mol percent;

a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from 5 to 90 mol percent;

a fluoride,  $\text{BaF}_2 + \text{RFX}$ , wherein  $\text{RFX}$  is selected from the group comprising of  $\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$ , and  $\text{BiF}_3$ , from 5 to ~~30~~ 90 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm), europium (Eu), an oxide of manganese (Mn); and mixtures thereof.

10. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from 10 mol to 45 mol percent;

a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from 5 to 30 mol percent;

5 a fluoride,  $\text{BaF}_2 + \text{RF}_x$ , wherein  $\text{RF}_x$  is selected from the group comprising of

$\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$ , and  $\text{BiF}_3$ , from 45 to 75 85 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm),

10 europium (Eu), an oxide of manganese (Mn); and mixtures thereof.

11. (Previously presented) A fluorophosphate glass formed from a composition comprising:

a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , approximately 10 mol percent;

15 a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , approximately 18 mol percent;

a fluoride,  $\text{BaF}_2$ , approximately 72 mol percent; and

a dopant, approximately 10 weight percent: of the oxide of neodymium (Nd).

12. (Currently amended) A fluorophosphate glass formed from a composition comprising:

20 a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , approximately 10 mol percent;

a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , approximately 18 mol percent;

a fluoride,  $\text{BaF}_2$ , approximately 72 mol percent; and

a dopant, approximately 20 weight percent: of the oxide of erbium (Er).

25 13. (withdrawn)

14. (withdrawn)

15. (withdrawn)

16. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from ~~40~~ 5 to 60 mol percent;

a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from ~~40~~ 5 to 60 mol percent;

5 a fluoride,  $\text{BaF}_2 + \text{RF}_x$  wherein  $\text{RF}_x$  is selected from a group consisting of  $\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$ , and  $\text{BiF}_3$ , from 10 to 90 mol percent;

a dopant [ . ]; and

wherein the selection of the mol percent for the fluoride,  $\text{BaF}_2 + \text{RF}_x$  is a determining factor from which the mol percent of the metaphosphates are selected to provide a 100 percent mol composition for the fluorophosphate glass.

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17. (Canceled)

18. (Currently amended) The glass as in claim 16 wherein the dopant is selected from the group comprising of: the rare earth elements neodymium (Nd), erbium (Er),  
15 ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), samarium (Sm), europium (Eu), praseodymium (Pr); an oxide of manganese (Mn); and mixtures thereof.

19. (Original) The glass as in claim 18 wherein the dopant is selected from the oxides of  
20 the rare earth elements.

20. (Previously presented) The glass as in claim 18 wherein the dopant on a weight percent basis is 2 to 15 percent.

21. (Original) The glass as in claim 18 wherein the dopant is selected from the fluorides  
25 of the rare earth elements.

22. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from 5 to 60 mol percent;  
a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from 5 to 60 mol percent;  
a fluoride,  $\text{BaF}_2 + \text{RFx}$  selected from the group comprising of  $\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$   
and  $\text{BiF}_3$ , from 10 to 90 mol percent; and

5 a dopant, from 2 to 20 weight percent, selected from the group consisting of: the  
oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb),  
thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm),  
europium (Eu); an oxide of manganese (Mn); and mixtures thereof.

10 23. (Currently amended) A fluorophosphate glass formed from a composition  
comprising:

a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from 5 to 90 mol percent;

a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from 5 to 90 mol percent;

15 a fluoride,  $\text{BaF}_2 + \text{RFx}$  wherein  $\text{RFx}$  is selected from the group comprising of  
 $\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$  and  $\text{BiF}_3$ , from 5 to 90 mol percent; and

a dopant, from 2 to 20 weight percent, selected from the group consisting of: the  
oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb),  
thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm),  
europium (Eu); an oxide of manganese (Mn); and mixtures thereof.

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24. (Currently amended) A fluorophosphate glass formed from a composition  
comprising:

a metaphosphate,  $\text{Ba}(\text{PO}_3)_2$ , from 10 to 45 mol percent;

a metaphosphate,  $\text{Al}(\text{PO}_3)_3$ , from 5 to 30 mol percent;

25 a fluoride,  $\text{BaF}_2 + \text{RFx}$  wherein  $\text{RFx}$  is selected from the group comprising of  
 $\text{CaF}_2$ ,  $\text{MgF}_2$ ,  $\text{PbF}_2$  and  $\text{BiF}_3$ , from 45 to 90 mol percent; and

a dopant, from 2 to 20 weight percent, selected from the group consisting of: the  
oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb),

thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm), europium (Eu); an oxide of manganese (Mn); and mixtures thereof [ . ]; and

wherein the selection of the mol percent for the fluoride,  $BaF_2 + RF_x$  is a determining factor from which the mol percent of the metaphosphates are selected to provide a 100 percent mol composition for the fluorophosphate glass.

25. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate,  $Ba(PO_3)_2$ , approximately 10 mol percent;

a metaphosphate,  $Al(PO_3)_3$ , approximately 18 mol percent;

a fluoride,  $BaF_2 + RF_x$  wherein  $RF_x$  is selected from the group comprising of  $CaF_2$ ,  $MgF_2$ ,  $PbF_2$  and  $BiF_3$ , approximately 90 72 mol percent; and

a dopant, approximately 5 weight percent: of the oxide of neodymium (Nd).

26. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate,  $Ba(PO_3)_2$ , approximately 10 mol percent;

a metaphosphate,  $Al(PO_3)_3$ , approximately 18 mol percent;

a fluoride,  $BaF_2 + RF_x$  wherein  $RF_x$  is selected from the group comprising of  $CaF_2$ ,  $MgF_2$ ,  $PbF_2$  and  $BiF_3$ , approximately 90 72 mol percent; and

a dopant, approximately 10 weight percent: of the oxide of erbium (Er).

27. (Withdrawn)

28. (Withdrawn)

29. (Withdrawn)